

In the Claims

Please cancel Claims 24-39 without prejudice and enter new Claims 40-46. The attached appendix includes a copy of new Claims 40-46 that indicates newly added language by underlining.

40. An ultrasonic imaging method comprising:

(a) acquiring image data for a plurality of frames, each frame identified with a respective phase of a physiological cycle;

(b) generating a first extended field of view image from image data associated with a first phase of the physiological cycle from multiple selected ones of the frames of (a) associated with the first phase of the physiological cycle and acquired from substantially co-planar, partially-overlapping spatial regions;

(c) generating a second extended field of view image associated with a second phase of the physiological cycle from image data from multiple selected ones of the frames of (a) associated with the second phase of the physiological cycle and acquired from substantially co-planar, partially-overlapping spatial regions; and

(d) displaying at least the first and second extended field of view images in sequence to a user.

41. An ultrasonic imaging system comprising:

(a) means for acquiring image data for a plurality of frames, each frame identified with a respective phase of a physiological cycle;

(b) means for generating a first extended field of view image associated with a first phase of the physiological cycle from image data from multiple selected ones of the frames of (a) associated with the first phase of the physiological cycle and acquired from substantially co-planar, partially-overlapping spatial regions;

(c) means for generating a second extended field of view image associated with a second phase of the physiological cycle from image data from multiple selected ones of the frames of (a) associated with the second phase of the physiological cycle and acquired from substantially co-planar, partially-overlapping spatial regions; and

(d) means for displaying at least the first and second extended field of view images in sequence to a user.

42. An ultrasonic imaging method comprising:

- (a) acquiring image data for a plurality of frames;
- (b) extracting a time reference based on a Doppler characteristic of the image data of (a);
- (c) identifying each frame with a respective phase of a physiological cycle based at least in part on the time reference of (b);
- (d) generating a first image from image data associated with a first phase of the physiological cycle from multiple selected ones of the frames of (a) associated with the first phase of the physiological cycle;
- (e) generating a second image associated with a second phase of the physiological cycle from image data from multiple selected ones of the frames of (a) associated with the second phase of the physiological cycle; and
- (f) displaying at least the first and second images in sequence to a user.

43. The method of Claim 42 wherein the Doppler characteristic of (b) comprises at least one of maximum Doppler flow velocity and maximum Doppler energy.

44. The method of Claim 42 wherein (b) comprises:

- (b1) assessing mean Doppler energy for said plurality of frames.

45. The method of Claim 44 wherein (b) further comprises:

- (b2) detecting one of the frames characterized by a maximum mean Doppler energy.

46. The method of Claim 42 wherein the first and second images are respective extended field of view images created from selected frames of (a) acquired from substantially co-planar, partially overlapping spatial regions.